

BALL GRID ARRAY PACKAGE WITH HEAT SINK DEVICE

ABSTRACT OF THE INVENTION

5 The present invention provides the heat sink device for the ball grid array package to improve the heat dissipation. The heat sink device includes a first part of heat sink assembly that comprises a heat dissipating element above the heat sink body and is used to increase the heat dissipating area; and at least two conductive pillars on the
10 backsides of the heat sink body, which is used to fix the heat sink assembly with PC board and also conducting the heat flux from thermal source to heat dissipation element; a conductive protruding block on the backside of the heat sink body, wherein the conductive protruding block used to associate with the cavity of the ball grid array
15 package to increase the heat conductivity. In addition, the second part of the heat sink assembly comprises a bottom plate that used to contact with the backside of the PC board, so as to increase the heat dissipation to remove the heat that is generated from the PC board, and to join the at least two conductive pillars of the heat sink body to
20 fix the heat sink assembly on the PC board.